Trident Warrior 2006

Raising the Bar on Civil-Military Communications

By Kevin Kurtz

Shortly after Hurricane Katrina devastated the Gulf Coast in September 2005, it became evident that civil authorities required assistance from the Defense Department. The U.S. Navy provided a command ship, USS Iwo Jima (LHD 7), and other assets that assisted in the response and recovery phases.

Better planning from all agencies involved in the disaster could have prevented some of the chaos that occurred in the hours, days and weeks following the event. One of the common lessons learned from Katrina was the need to share data and information between agencies involved with recovery and relief efforts. An important commodity before, during and after the incident was geospatial data. While many agencies were collecting data — they were not sharing.

During Trident Warrior 2006, the Navy's annual FORCEnet experiment, a defense support of civil authority scenario was developed to look at civil-military interaction and technology that could be utilized to improve the process.

Trident Warrior introduced a visualization tool named TRITON that was developed at the Naval Surface Warfare Center (NSWC), Mission Assurance Division in Dahlgren, Va. TRITON is one tool of a family of Web-enabled situational awareness technologies (Web-SAT), using a Geographic Information System (GIS) Internet Map Service to provide common data in an Internet browser.

TRITON is displayed in a thin-client, requiring no downloads, plug-ins or installs. It provides a dynamic mapping environment with overlays of local and remote data, including imagery on-the-fly, near-real-time data feeds, infrastructure and remote Web services.

The community of interest (COI) established for Trident Warrior included: Naval Network Warfare Command; NSWC Mission Assurance Division; USS Bonhomme Richard (LHD 6) Expeditionary Strike Group; U.S. Northern Command; U.S. Joint Forces Command; Navy Region Southwest; U.S. Coast Guard; National Geospatial-Intelligence Agency (NGA); National Oceanic and Atmo-spheric Administration (NOAA); California Office of Emergency Services; San Diego State University Visualization Center; County of San Diego; and the cities of San Diego and Chula Vista. Some members of the COI were data providers, some data users and, in most cases, they were both.

The emphasis during this part of the experiment was to share data across multiple agencies for dissemination and collaborate on a common digital map. This would allow for a common operational picture (COP) on an unclassified network to be used by all participants utilizing a browser. The data was both static, in the form of vector and raster data (imagery), along with dynamic data, near-real-time weather, and the Automatic Identification System used by ships to identify vessels at sea when not in sight.

Utilizing a service-oriented architecture, not all the data resided on servers in Dahlgren. Weather data was pulled from NOAA via a Web service. Coast Guard Automatic Identification System track data was extracted from a server at U.S. Northern Command, and the cities of San Diego and Chula Vista provided access to their Internet map servers for data dissemination. This allowed all data providers to maintain their own data and ensure accuracy and validity of their geospatial data.

Trident Warrior allowed unparalleled data integration and interoperability across DoD, federal, state and local agencies demonstrating coordination and collaboration that could assist in preparing for, responding to and recovering from a terrorist event or natural disaster. The cooperation displayed during the experiment was phenomenal and provides a great model the next time the military is called on to support civil authorities.

Photo above, the Trident Warrior 2006 team gathered alongside the USS Bonhomme Richard (LHD 6) in San Diego, Calif., June 2006.

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